SANITIZATION

used for subsequent sanitizing but may be reused for other purposes such rinse stations and piping). Prepare an appropriate volume of 0.33 to 0.5%

at least daily or more often if the solution becomes diluted or soiled.

on precleaned surfaces such as equipment, pipelines, tanks, vats, fillers, solution through the system for a minimum of 4 hours. Process usage valves evaporators, pasteurizers and aseptic equipment in dairies, breweries, should be opened and closed to expose internals to the PERACLEAN® 15. wineries, beverage and food processing/packing plants, egg processing/ Completely drain the system of dilute PERACLEAN® 15 solution. Thoroughly packing equipment surfaces, and eating establishments. This product is rinse the system by filling with RO permeate or similar quality water and effective as a sanitizer when solution is prepared in water of up to 400 ppm recirculate before drainage. Repeat the process until test for residuals hardness as CaCO3. This product has demonstrated greater than a 99.999% indicates there is less then 3 ppm peroxygen. reduction of survivors after a 30 second exposure period in the AOAC Continuous/Intermittent addition to minimize the Accumulation of Germicidal and Detergent Sanitizing Action of Disinfectants study.

SANITIZING FOOD CONTACT SURFACES

Effective against Staphylococcus aureus and Escherichia coli.

Prior to sanitizing, remove gross food particles, then wash with a detergent SURFACES)PERACLEAN® 15, as received or diluted, may be added solution, followed by a potable water rinse. Sanitize with a concentration of continuously to the feed water system, between system sanitizing episodes, 0.33 fluid ounce PERACLEAN® 15 dissolved in 5 gallons of water (0.053% to aid in minimizing the regrowth/ accumulation of biological matter. The v/v concentration). This will provide 88 ppm of peroxyacetic acid. At this peroxygen residual in the system which will be effective will vary with the dilution PERACLEAN® 15 is effective against Staphylococcus aureus and design and usage characteristics of the system. Adjust the addition rate Escherichia coli. Use immersion, coarse spray or circulation techniques of PERACLEAN® 15 or the solution and periodically monitor residual as appropriate to the equipment. All surfaces should be exposed to the peroxygen so that the desired effect is obtained. For continuous addition, sanitizing solution for a period of at least 60 seconds or more if specified by do not exceed 7 ppm (0.33 fluid ounce of product per 440 gallons of water) governing sanitary code. Drain thoroughly. Do not rinse.

SANITIZING, EATING, DRINKING, AND FOOD PREP UTENSILS

a presoak treatment. Wash with a recommended detergent. Rinse with clean give 110 ppm peroxyacetic acid and 160 ppm hydrogen peroxide. water. Sanitize in a solution of 0.33 fluid ounce PERACLEAN® 15 dissolved HARD SURFACE DISINFECTION in 5 gallons of water. Immerse all utensils for at least 60 seconds or contact PERACLEAN® 15 disinfects as it cleans in one operation. PERACLEAN® time specified by governing sanitary code. Drain and air drv.

SANITIZING TABLEWARE

ounce PERACLEAN® 15 dissolved in 5 gallons of water. Do not exceed stainless steel, or glass. 0.053 % v/v. This will provide 88 ppm of peroxyacetic acid. Air dry

below 48 ppm peroxyacetic acid, periodically test the rinse solution with a nursing services; autopsy facilities. Also, use PERACLEAN® 15 in nursing suitable test kit and adjust the dispensing rate accordingly. Consult your homes, other health-care facilities, schools, colleges, veterinary clinics. sanitizing tableware in warewashing machines.

FINAL SANITIZING BOTTLE RINSE

PERACLEAN® 15 may be used as a final sanitizing rinse for returnable and non-returnable bottles at a 0.053% dilution (0.33 fluid ounce PERACLEAN®

BATCH SANITIZATION (NON-FOOD CONTACT SURFACES) OF ULTRA FILTRATION

AND REVERSE OSMOSIS (RO) MEMBRANES

PERACLEAN® 15 can be used for the sanitization of ultra filtration, medical and non-medical institutional/industrial reverse osmosis (RO) membranes and their associated distribution systems.

by AOAC and EPA methods. This product may not eliminate all vegetative choleraesuis, Pseudomonas aeruginosa, Trichophyton mentagrophytes, and Do not contaminate water, food, or feed by storage and disposal. systems due to their construction and/or assembly, but can be relied upon as CaCO3) and 5% fetal bovine serum on hard nonporous surfaces. For to reduce the number of microorganisms to acceptable levels when used as heavily soiled areas a pre-cleaning step is required. Apply solution with mop, with PERACLEAN® 15.

Remove biological or organic fouling from the membrane or other parts of the solution and entrapped soil with a clean wet mop, cloth, or wet vacuum system with an appropriate cleaner. Flush the system with RO permeate or pickup. Prepare a fresh solution daily or when it becomes soiled or diluted. similar quality water. Remove mineral deposits with suitable acidic cleaner PERACLEAN® 15 is designed for use in animal hospitals, animal laboratories, prior to sanitizing the membranes with PERACLEAN® 15. Flush the system kennels, pet shops, zoos, pet animal quarters, poultry premises, poultry Containers less than 5 gallons: again with the RO permeate or similar quality water. Prepare an appropriate hatcheries, and livestock quarters. When used as directed, PERACLEAN® volume of 1% solution of the product (0.33 gallon of PERACLEAN® 15 to 15 is specifically designed to disinfect, deodorize and clean inanimate, hard, 834 pom hydrogen peroxide. Fill the entire water circuit to be sanitized with runs, cages, and feeding and watering equipment. In addition PERACLEAN®

Containers greater than 5 gallons: the dilute solution and allow the solution to reach a minimum of 20°C (68°F). 15 will deodorize those areas which are generally hard to keep smelling fresh Recirculate the dilute solution of PERACLEAN® 15 for a minimum of 10 such as garbage storage areas, empty garbage bins and cans, and any other minutes. Allow membrane elements to soak in the solution for a minimum areas which are prone to odors caused by microorganisms. there is less than 3 ppm per oxygen. Diverting product water to drain can rinsed with potable water before reuse. reduce residuals.

BATCH SANITIZATION (NON-FOOD CONTACT SURFACES) OF PIPING

Isolate incompatible equipment from piping system. This includes activated carbon filters and ion exchange equipment. Turn off power to ultraviolet NOTE: FOR MECHANICAL OPERATIONS prepared use solution may not be light units. Estimate total volume of water contained in the system (tanks, PERACLEAN® 15 by adding 0.33 to 0.5 gallons of the product for every FOR MANUAL OPERATIONS fresh sanitizing solutions should be prepared 100 gallons of solution prepared. Use RO permeate or similar quality water for dilution. This will provide 554 to 840 ppm peroxyacetic acid and 813 to PERACLEAN® 15 peroxyacetic acid sanitizer is recommended for use 1232 ppm hydrogen peroxide. Recirculate the dilute PERACLEAN® 15

BIOLOGICAL MATTER BETWEEN INTERMITTENT SANITIZING EPISODES IN

PIPING SYSTEMS ASSOCIATED WITH RO MEMBRANES (NON-EOOD CONTACT

PERACLEAN® 15. This will give 1 ppm peroxyacetic acid and 1.4 ppm hydrogen peroxide. For intermittent feed, do not exceed 750 ppm (8.5 fluid Remove gross food particles by a prescrape, a preflush and, when necessary, ounces of product per 100 gallons of water) PERACLEAN® 15. This will

such as tables, chairs, countertops, bathroom fixtures, sinks, bed frames, For sanitizing tableware in low temperature warewashing machines, inject shelves, racks, carts, refrigerators, coolers, glazed tile, linoleum, vinyl, non- if inhalted: Move person to fresh air. If person to fresh air. PERACLEAN® 15 into the final rinse water at a concentration of 0.33 fluid porous glazed porcelain, plastic (such as polypropylene and polyethylene),

Areas of use in hospitals: PERACLEAN® 15 may be used for surgical and To insure that the PERACLEAN® 15 sanitizer concentration does not fall obstetrical suites; housekeeping services; physical therapy departments; buildings, recreational facilities, retail and wholesale establishments.

level disinfectant on any surface or instrument that (1) is PHYSICAL AND CHEMICAL HAZARDS 15 dissolved in 5 gallons of water). This will provide 88 ppm of peroxyacetic the body, or (2) contacts intact mucous membranes but released could initiate combustion. which does not ordinarily penetrate the blood barrier or ENVIRONMENTAL HAZARDS otherwise enter normally sterile areas of the body. This product may be used to preclean or decontaminate critical or semi-critical medical devices prior to sterilization or high level disinfection.

COMBINATION DISINFECTION AND CLEANING

This product has been shown to be an effective disinfectant when tested PERACLEAN® 15 is effective against Staphylococcus aureus, Salmonella STORAGE AND DISPOSAL wet all surfaces thoroughly. Allow to remain wet for 10 minutes, then remove

of 20 minutes. Rinse the RO system and test for residuals to ensure that All treated equipment that will contact food, feed, or drinking water must be

For heavily soiled areas, a pre-cleaning step is required. Prepare a fresh dispose in a sanitary landfill, or by incineration, if allowed by state and local authorities by burning. solution for each use

PERACLEAN ® 15 🔿

(PEROXYACETIC ACID SOLUTION) PERACLEAN® 15 IS A PEROXYACETIC ACID-BASED SANITIZER/DISINFECTANT DEVELOPED FOR THE FOLLOWING USES:

Institutional/Industrial Sanitizing of Previously Cleaned Non-Porous Food Contact Surfaces in Dairies Wineries Breweries •Food and Beverage Plants Disinfecting Poultry Premises

Poultry Hatcheries

and Ultra Filtration

Animal Housing Facilities

Hard Surface Disinfection in: Hospitals Health Care Facilities Schools •Colleges Veterinary Clinics Animal Life Science Laboratories Industrial Facilities Office Buildings •Recreational Facilities •Reverse Osmosis Membranes •Retail and Wholesale

Establishments

Bacteria, Fungi. Active Ingredients: and Slime Control in: Hydrogen Peroxide 22.0% Peroxyacetic Acid Pulp and Paper Mill Systems Inert Ingredients: Dispersed Pigments Cooling Water Systems Total: Coatings Preservation Net contents as stated on container

> EPA Reg No: 54289-4 EPA ESTAB. NO: 70253-CA-002. 70547-IL-001

15.0%

63.0%

100%

Before Using This Product, Please Read This Entire Label Carefully.

KEEP OUT OF REACH OF CHILDREN **DANGER**

Label not for use in California

FIRST AID

If in eyes: Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes. then continue rinsing eye. Call poison control center or doctor for treatment advice.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call poison control center or doctor for treatment advice

15 can be used to disinfect floors, walls and other hard nonporous surfaces

If swallowed: Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person. Call poison control center or doctor for treatment advice.

mouth, if possible. Call a poison control center or doctor for further treatment advice.

Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER. CORROSIVE. Causes irreversible eye damage and skin burns. May be fatal if inhaled or absorbed through the skin. Harmful if technical service representative for assistance and further information on animal life science laboratories, industrial facilities, dietary areas, office swallowed. Do not breathe vapors or spray mist. Do not get in eyes on skin or on clothing. Wear goggles and/or face shield and rubber gloves when handling. Do not enter an enclosed area without proper respiratory protection. Wash thoroughly with soap and water after handling and This product is not to be used as a terminal sterilant/high before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash before reuse.

> introduced directly into the human body, either into or in STRONG OXIDIZING AGENT. Corrosive. Mix only with water. Product must be diluted in accordance with label directions prior to use. contact with the bloodstream or normally sterile areas of PERACLEAN® 15 is not combustible; however, at temperatures exceeding 156°F, decomposition occurs releasing oxygen. The oxygen

This pesticide is toxic to birds, fish, and aquatic invertebrates. Caution should be used when applying indoors because pets may be at risk. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the US Environmental Protection Agency.

microorganisms in reverse osmosis membranes and their associated piping Escherichia coli O157:H7 at 0.08% (0.5 fl. oz./5 gal.) in hard water (400 ppm PESTICIDE STORAGE: Store in original containers in a cool, well-vented area, away from direct sunlight. Do not allow product to become overheated in storage. This may cause increased degradation of the product, which will decrease product effectiveness. In case of spill, flood area with large quantities of water. Do not store in a manner where cross-contamination with other pesticides or fertilizers could occur.

directed. Check with equipment manufacturer for membrane compatibility cloth, sponge, brush, scrubber, or coarse spray device, or by soaking so as to

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Open dumping is prohibited. If wastes cannot be disposed of according to label directions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container unless the directions for use allow a different (concentrated) product to be diluted in the container."

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip, Fill the container ¼ full with water and recap. Shake for 10 seconds, Pour rinsate into application equipment or a mix tank or store rinsate 100 gallons of water). This will provide 568 ppm of peroxyacetic acid and surfaces such as walls, floors, sink tops, furniture, operating tables, kennel for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Triple rinse (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip the container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand container on its end and tip back and for the several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use of disposal. Repeat the procedure two more times. Then offer for recycling or

DISINFECTION OF POULTRY PREMISES, TRUCKS, COOPS AND For use in the manufacture of paper and paperboard intended for food-CRATES

POULTRY HATCHERY DISINFECTION

Remove all poultry and feeds from premises, trucks, coops and crates. Remove all litter and droppings from floors, walls and surfaces of facilities occupied or traversed by poultry. Empty all troughs, racks and other feeding and watering appliances. Thoroughly clean all surfaces with a detergent and rinse with water. Saturate surfaces with a 0.08% (0.5 fl. oz./5 gal.) solution of PERACLEAN® 15 for a period of 10 minutes. Ventilate buildings, coops and other closed spaces. Do not house poultry or employ equipment until treatment has been absorbed. set or dried. Thoroughly scrub treated feed racks, troughs, automatic feeders, fountains and waterers with a detergent and rinse with potable water before reuse. See your technical representative for specific recommendations for all cleaning and rinsing requirements.

DISINFECTION AND DEODORIZING OF ANIMAL HOUSING FACILITIES

(BARNS, KENNELS, HUTCHES, ETC.)

Do not use in milking stalls, milking parlors, or milk houses (for phenolics, cresylic acid, and pine oils). Remove animals and feed from premises, vehicles, and enclosures. Remove litter, waste matter, and gross soils MILL PROCESS WATERS: from floors, walls and surfaces of barns, pens, stalls, chutes and other *Continuous Feed - PERACLEAN® 15 should be fed continuously surfaces with a detergent and rinse with water. Saturate surfaces with a PERACLEAN® 15 per ton (dry basis) of pulp or paper produced. 0.08% (0.5 fl. oz./5 gal.) solution of PERACLEAN® 15 for a period of 10 •Intermittent Feed – PERACLEAN® 15 should be fed intermittently (6 to 8 with soap or detergent, and rinse with potable water before reuse.

FOR SANITIZING OF HATCHING EGGS

Prepare a solution of PERACLEAN® 15 by diluting 0.33 fluid ounce PERACLEAN® 15 with 5 gallons of water. As eggs are gathered or prior to setting, apply solution as a coarse spray so as to lightly wet all shell surfaces

NOTE: This product at its use dilution is compatible with stainless steel and aluminum surfaces. If product is intended to be used on any other surface, it is recommended that you apply product to a smaller test area to determine compatibility before proceeding with its use.

FOR TREATMENT OF RAW, UNPROCESSED FRUIT AND VEGETABLE

PERACLEAN® 15 can be applied as a dip or spray to control the growth of non-public health microorganisms that may cause decay and/or spoilage on raw, post-harvest fruits and vegetables during the washing process. This product can be applied during physical cleaning processes, including at the roller spreader, washer manifold, dip tank, on the brushes or elsewhere in the washing process prior to, simultaneously with or after detergent wash.

1.Prepare treating solution by diluting 1 fluid ounces per 16 gallons of potable water. This will provide 85 ppm peroxyacetic acid and 125 ppm hydrogen peroxide

2. Apply the diluted sanitizer solution using a coarse spray directed at the fruits or vegetables, or by soaking the fruits and vegetables in the solution. Allow a contact time of at least 45 seconds.

3 The treated produce can be drain dried without a notable water rinse 4.Do not reuse solution after treatment.

FOR THE TREATMENT OF PROCESSED FRUITS AND VEGETABLES AND

PROCESS WATERS TO CONTROL GROWTH OF NON-PUBLIC HEALTH

MICRORGANISMS THAT CAN CAUSE SPOILAGE

1.Prepare treating solution by diluting 1.5 fluid ounces per 25 gallons of potable water. This will provide 80 ppm peroxyacetic acid and 117 ppm hydrogen peroxide.

2. Apply the diluted sanitizer solution as a spray or dip. Allow a contact time of at least 45 seconds. No rinse following application is required. This use complies with the requirements of 21 CFR173.315 (a) 5

3. The treated produce can be drain dried without a potable water rinse. 4.Do not reuse solution after treatment.

BIFOULING CONTROL IN PILP AND PAPERMILL SYSTEMS

contact and non-food contact

PERACLEAN® 15 can be used to control bacteria, fungi, and fresh water organisms in paper, paperboard, or nonwoven process water and influent water systems. Suitable dosing points include but are not limited to: stock chests, pulpers, the white water loop and white water storage systems and influent water streams

IContamination with other chemicals could result in product decomposition

•Add PERACLEAN® 15 at a point in the system where uniform mixing and even distribution will occur.

•Use 0.1 to 0.5 lb. (1.4 to 6.85 fl. oz.) of PERACLEAN® 15 per 1000 gallons of solution as a continuous or intermittent slug treatment. This will provide 1.8 to 9 ppm peroxyacetic acid (12 to 60 ppm PERACLEAN® 15).

Repeat treatment as required to maintain control.

INFLUENT WATER SYSTEMS:

PERACLEAN® 15 should be fed continuously to incoming fresh water streams (nonpotable use only) at dosages ranging from 10 to 975 ppm peroxyacetic acid (65 to 6500 ppm PERACLEAN® 15).

facilities and fixtures occupied or traversed by animals. Empty all troughs, at dosages ranging from 10 to 975 ppm peroxyacetic acid (65 to 6500 racks and other feeding and watering equipment. Thoroughly clean all ppm PERACLEAN® 15). This range is equivalent to 0.13 to 13 lbs.

minutes. Immerse all halters, ropes, and other types of equipment used in times per day) at dosages ranging from 10 to 975 ppm peroxyacetic acid handling and restraining animals, as well as forks, shovels, and scrapers (65 to 6500 ppm PERACLEAN® 15). This range is equivalent to 0.13 to used for removing litter and manure. Ventilate buildings, cars, boats, and 13 lbs. PERACLEAN® 15 per ton (dry basis) of pulp or paper produced. other closed spaces. Do not house livestock or employ equipment until Shock Dose - PERACLEAN® 15 should be shock dosed at dosages treatment has been absorbed, set, or dried. Thoroughly scrub all treated ranging from 98 to 2048 ppm peroxyacetic acid (648 to 13.638 ppm feed racks, mangers, troughs, automatic feeders, fountains, and waterers PERACLEAN® 15). This range is equivalent to 1.3 to 27.3 lbs. PERACLEAN® 15 per ton (dry basis) of pulp or paper produced.

CONTROL OF BACTERIA AND FUNGLIN NON-FOOD

CONTACT DISPERSED PIGMENTS

PERACLEAN® 15 can be used in the control of bacteria and fungi in the manufacture and storage of dispersed pigments such as kaolin clay. titanium dioxide, calcium carbonate, calcium sulfate, barium sulfate, magnesium silicate and diatomaceous earth used in naint and naner production

Add 0.1 to 0.5 lbs. (1.4 to 6.85 fl. oz.) of PERACLEAN® 15 to each 1000 lbs. of pigment slurry. This will provide 15 to 75 ppm peroxyacetic acid (100 to 500 ppm PERACLEAN® 15).

CONTROL OF SLIME FORMING BACTERIA IN COOLING WATER SYSTEMS (COOLING TOWERS, EVAPORATIVE

CONDENSERS)

·Severely fouled systems should be cleaned before adding the PERACLEAN® 15 solution. PERACLEAN® 15 should be added in the system directly and not mixed with any other chemicals or additives.

CONTROL OF BACTERIA AND FUNGI IN COATING

PRESERVATION

Not for use in manufacture of material intended for food contact.

PERACLEAN® 15 can be used as an in-container preservative for the control of bacteria and fungi in water-based coatings such as paper Add 0.1 to 0.5 lbs. (1.4 to 6.85 fl. oz.) of PERACLEAN® 15 to each 1000

lbs. of preservative. This will provide 15 to 75 ppm peroxyacetic acid (100 to 500 ppm PERACLEAN® 15).

ANTIMICROBIAL RINSE OF PRE-CLEANED OR NEW RETURNABLE OR

Non-Returnable Containers:

To reduce the number of non-pathogenic beverage spoilage organisms. Effective against Aspergillus versicolor, Byssochlamys fulva, Pediococcus damnosus. Lactobacillus buchneri, and Saccharomyces cerevisiae.

1.Prepare PERACLEAN® 15 solution by adding 9.85 fl. oz. to 5 gallons potable water. This provides 2,632 ppm peroxyacetic acid.

2.Apply antimicrobial rinse at a temperature of 40°C to 60°C (104°F to 140°F) and allow a minimum seven-second contact period

3.Allow containers to drain thoroughly, and then rinse with sterile or notable water



Manufactured by: **Evonik Corporation** 299 Jefferson Rd Parsippany, New Jersey 07054-0677

